



Deutscher Tropentag, October 9-11, 2002, Witzenhausen  
“Challenges to Organic Farming and Sustainable Land Use  
in the Tropics and Subtropics”

***In situ* Conservation of Native Potatoes in the Peruvian Highlands**

ULRIKA FRANK<sup>1</sup>, MARIO E. TAPIA<sup>2</sup>, BRIGITTE L. MAASS<sup>1</sup>

<sup>1</sup>Georg-August University Göttingen, Institute for Crop and Animal Production in the Tropics, Germany

<sup>2</sup>GEF-Peru, Project “*In situ* Conservation of Native Cultivars and their Wild Relatives”, Peru

**Abstract**

The central Andes and Peru are considered as one of the major centres of agricultural biodiversity. In the last 400 years various crop species, which originated in the Andes, were distributed worldwide. The most famous of them is the potato (*Solanum tuberosum*), which has become a staple food in many regions of the world.

Modern agriculture is characterized by uniformity of production and it depends totally on the genetic material developed from traditional varieties or wild crop relatives, which are used in breeding programs. Therefore, great efforts are done to prevent the disappearance of old varieties or landraces of the most important food plants.

This study was carried out in cooperation with the GEF-Project “Conservación *In Situ* de los Cultivos Nativos y sus Parientes Silvestres” in the Department of Huánuco, situated in the central Andes of Peru. The objective of the study was to identify the main factors that influence farmers’ decisions in conserving old potato varieties. Overall 68 households from two watersheds were surveyed and the gathered data were analyzed and compared.

One important factor for the loss of old varieties was the market. Many farmers replaced their mixture of native varieties by modern ones or increased the number of commercial native potatoes because of greater market demand. One of the strategies for conserving old varieties is to find new markets for native potatoes and their processed products because most farmers try to increase their economic incomes. Utilization of native potatoes is often still restricted to uses at the family level, however, conservation of biodiversity will only be sustainable if it is combined with broader utilization.

Another finding was that traditional ways of life and conservation of the inherent biodiversity were strongly related. A relation between “cultural erosion” and “genetic erosion” has also been suggested by several scientists from the International Potato Centre (CIP) in Lima. But there is still a great deficiency in investigating this theme, which requires the definition of terms like “traditional culture” or “modernization”, and which should be carried out by multidisciplinary teams.

**Keywords:** Andes, biodiversity, genetic resources, *in situ* conservation, native potato varieties, Peru